

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Page White & Farrer
54 Doughty Street
London WC1N 2LS
United Kingdom

DIARY
UPDATED

RECEIVED
25 FEB 2005

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

| | | |
|---|---|---|
| Applicant's or agent's file reference 301608WOPRS/AEC | | Date of mailing (day/month/year) 23-02-2005 |
| International application No. PCT/IB03/004331 | | REPLY DUE within 30 days from 26 March 2005 at the latest. |
| International filing date (day/month/year) 03-09-2003 | Priority date (day/month/year) 23-09-2002 | |
| International Patent Classification (IPC) or both national classification and IPC H047 7/38 | | |
| Applicant Nokia Corporation et al | | <div style="border: 1px solid black; padding: 2px;"> DEADLINES ENTERED 1. <u>26/3/05</u> 2. <u> / / </u> 3. <u> / / </u> </div> |

1. ☐ The written opinion established by the International Searching Authority:

☐ is
☐ is not

 considered to be a written opinion of the International Preliminary Examining Authority.
2. This First (first, etc.) opinion contains indications relating to the following items:
 - ☒ Box No. I Basis of the opinion
 - ☐ Box No. II Priority
 - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Box No. IV Lack of unity of invention
 - ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Box No. VI Certain documents cited
 - ☐ Box No. VII Certain defects in the international application
 - ☒ Box No. VIII Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 23-01-2005

| | |
|--|--|
| Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 46 8 667 72 88 | Authorized officer Peter Hedman/MN Telephone No. 46 8 782 25 00 |
|--|--|

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/IB03/004331

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This opinion is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this opinion has been established on the basis of *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed.")*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages _____ received by this Authority on _____
- pages _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages _____ as amended (together with any statement) under Article 19
- pages _____ received by this Authority on _____
- pages _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages _____ received by this Authority on _____
- pages _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/IB03/004331

Box No. V Reasoned statement under Rule 66.2(a)(II) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------|---|
| Novelty (N) | Claims | <u>1-5, 7-9, 11, 13-19, 21-25, 29, 30</u> |
| | Claims | |
| Inventive step (IS) | Claims | <u>1-30</u> |
| | Claims | |
| Industrial applicability (IA) | Claims | <u>1-30</u> |
| | Claims | |

2. Citations and explanations:

What is claimed is a method and a location module apparatus for calculating a region around an estimated location in which a mobile terminal can be located. The chosen region determines the present accuracy of the location of a mobile terminal.

Cited Document:

D1: US 6 321 092 B1
D2: WO 01/31965 A1
D3: US 2002/0039905 A1

In D1 a method for locating a mobile terminal in a communication network is presented, wherein the location of a mobile terminal is estimated, using the best or most appropriate of a variety of available location methods. Alternatively, a combination of a plurality of location methods may be chosen. Based on the location information an uncertainty region, such as an arc or a circle, is retrieved by utilising one, out of a plurality of available methods (See abstract; column 2, line 42-column 3, line 47; column 5, line 18-column 7, line 30; column 7, line 42-column 8, line 22; column 8, line 56-column 9, line 16; column 9, line 56-column 10, line 18; column 10, line 58-column 11, line 8; figure 1, 3A-3E).

D2 refers to a multiple source location method, wherein location information with different resolution is retrieved from sources of different kind. Initially the most recent location is chosen, and as long as a predetermined condition is met, location information providing even better resolution is retrieved successively (See page 3, line 23-page 4, line 19; page 10, line 19-38; figure 1; abstract).

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V(I)

D3 discuss a positioning process of a mobile station, wherein a geographic representation of a cell is modelled and an uncertainty area, with a predetermined geometric shape is calculated. (See [0016]-[0024]; [0028]-[0029]; [0094]-[0096]; abstract; figure 2-5).

Consequently, the subject matter of claims 1-5, 7, 9, 11, 13, 14, 29 and 30 is previously known from both D1 and D2 alone, while the subject matter of claims 1-4, 9, 11 and 29 also is previously known from D3. Therefore, these claims are not novel.

The invention according to claim 6 differs from the method in D1 in that D1 fails to discuss a method in which two or more location methods are selected sequentially.

Due to these features, an improved accuracy of the obtained location may be achieved.

Consequently, with the background of D1, the problem is to derive a location result with a desired accuracy. From D2 a multiple source location method, in which the results derived from different location methods may be chosen is already known. Both D1 and D2 relate to the same technical field. No unexpected technical effect can be identified from a combination of these two documents, especially since it is unclear on what criteria the proposed sequential selection of location methods is based upon. For these reasons claim 6 of the claimed invention fails to involve an inventive step.

Claims 8 and 17-19 only express details which in this particular context are already commonly known to any person skilled in the art. Consequently, also these claims fail to describe a novel invention.

Furthermore, D3 suggests a number of varieties to choose from when selecting a method for the calculation of a region. To choose from a number of alternatives until some predetermined conditions are fulfilled, as suggested in claim 10 of the claimed invention, is considered as an obvious step to be taken by any person skilled in the art.

For this reason claim 10 fails to involve an inventive step. Especially since no specific conditions or criteria for specifying a successful calculating method are suggested in the claim.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V(II)

Without any further specification, claims 12 and 20 merely suggest a practising of obvious measures when calculating a region with a certain probability, or calculating a mass centre, respectively. Considering this and what is already known from D1-D3, also claim 12 and 20 fail to involve an inventive step.

In D3 a modelled geographic representation of a cell is calculated (See abstract). Claim 15 and 16 fail to further specify any distinguished modelling steps. Consequently, claims 15 and 16 both fail to disclose a novel invention.

Claims 21-25 merely suggest various assumptions, which only comprise obvious alternatives for the person skilled in the art. No unexpected technical effect can be derived from any of these assumptions. Also claims 21-25 therefore also fail to disclose a novel invention.

No unexpected technical effect would be achieved from simply applying the method known from D1-D3 in any of the commonly known contexts of claim 26, 27 or 28. For this reason these claims fail to involve an inventive step.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1, 5, 9 and 30 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The following functional statements do not enable the skilled person to determine which technical features are necessary to perform the stated functions:

- 1) No methods for calculating a region is suggested.
Consequently, the expression "...available methods..." is vague and unclear.
- 2) No conditions upon which to apply one of a number of available methods are suggested. The criteria for selecting between a plurality of methods therefore is unclear.

Claim 6 and 10 fail to meet the requirements of Article 6 for the following reason:

No conditions for stating an unsuccessful estimation process is suggested. These claims therefore are vague and unclear.

The rule mentioned in claim 14, as well as "...the step of modelling a cell..." mentioned in claims 15 and 16 are vague and unclear and leave the reader in doubt as to the meaning of the technical features to which the mentioned expressions refer, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT).